SSVEO IFA List **Date:02/27/2003**

STS - 72, OV - 105, Endeavour (10) **Time:04:05:PM**

Tracking No	Time	Classification	Documentation		Subsystem
MER - 5	**MET:** 03:23:19	Problem	**FIAR**	**IFA** STS-72-V-01	ECLSS
EECOM-1&2	**GMT:** 015:09:00		**SPR**	**UA**	**Manager:** N. Cerna
			IPR 77V-000?	**PR** ECL-5-11-0454	
					Engineer: C. Dumas

Title: FES Shutdowns (Orb)

Summary: During this time period the topping FES shut down twice on controller A and twice on controller B during a FES water dump. A subsequent FES core flush was terminated when the duct temperatures went below 50 ?F, indicating an unsuccessful attempt to de-ice the FES.A core flush performed at 17:13:13 G.m.t. regained successful operation of the topping FES. Remained on controller B for the rest of the mission.Previously the hi-load FES had experienced a controller A shutdown (11:11:07 G.m.t.) that was regained by switch cycle. Additionally, the topper failed to come out of standby twice (11:22:54 and 13:12:42 G.m.t.) while on controller A. These were considered to be nuisance shutdowns caused by control sensor lags.A borescope inspection of the topping evaporator core and a leak test of the topping evaporator A isolation and spray valves was performed. The condition of the core was visually unchanged from its preflight condition and the valves did not leak. The system A controller and control sensors were tested and no anomalies were noted. Also, the A feedline accumulator was tested and no anomalies were noted. The topping evaporator system A valves and the system A controller will be replaced.

Tracking No	Time	Classification	Documentation		Subsystem
MER - 17	**MET:** 07:17:52	Problem	**FIAR**	**IFA** STS-72-V-02	RCS
PROP-01	**GMT:** 019:03:33		**SPR**	**UA**	**Manager:** EP
			IPR 77V-000?	**PR** LP04-18-0673	x39030
					Engineer: RI
					x32340

Title: Primary RCS Thruster L1A Failed Off (Orb)

Summary: During RCS hotfire at 019:03:33:39 G.m.t. (07:17:52:39 MET), primary thruster L1A (s/n 574) failed-off due to low Pc on its first pulse and was deselected by RM. The 320 msec pulse started at a Pc of 11 psia and ramped to a peak of 16.5 psia prior to the deselection. Injector temperature cooling trends indicate the presence of both oxidizer and fuel flow. On soak back, the injector temperatures undershot the initial pre-firing temperature indicating minimal heat input and confirming low thruster performance.

Tracking No	Time	Classification	Documentation		Subsystem
MER - 18	**MET:** 07:17:58	Problem	**FIAR**	**IFA** STS-72-V-03	RCS
PROP-02	**GMT:** 019:03:39		**SPR**	**UA**	**Manager:** EP
			IPR 77V-000?	**PR** RP05-09-0191	x39030
					Engineer: RI
					x32340

Title: Primary RCS Thruster R2U Failed Leak (Orb)

Summary: During RCS hotfire at 019:03:39:45 G.m.t. (07:17:58:45 MET), the primary thruster R2U (s/n 620) oxidizer valve began leaking after its first pulse. The thruster fired a second time prior to being deselected by redundancy management (RM) as fail-leak. Both pulses were nominal. The fail-leak limit is approximately 30 ?F for oxidizer. The actual deselection came when the ox injector temperature was 17.5 ?F. This can be explained by the 0.52 Hz rate of the JET-LEAK MONITOR module and the ?filter? that requires 3 consecutive out-of-limit values prior to fault annunciation. This effectively requires the ox injector temperature to stay below 30 ?F for 6 seconds prior to deselection.

Tracking No	Time	Classification	Documentation		Subsystem
MER - 25	**MET:** 00:08:46	Problem	**FIAR**	**IFA** STS-72-V-04	EPD&C,MECH
	GMT: 011:09:49		**SPR**	**UA**	**Manager:** F. Alanis
			IPR 77V-0016	**PR** OEL-5-11-1121	
					Engineer: R. Phillips

Title: LO2 ET/Umbilical Frangible Nut Detonator Did Not Fire (Orb)

Summary: During the postflight inspection of ET/umbilical attachment hardware, it was found that 1 of 2 detonators in the frangible nut for the LO2 umbilical inboard

attach stud (disconnect 2) did not fire. During troubleshooting, a short was found in a connector at the debris containment can. The harness was removed and replaced and sent to the lab for analysis. Damage was found in a wire at the connector. Engineering is evaluating a potential overstress of a transistor in the EMEC.